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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,710	08/31/2001	Wolfgang Denker	HM-432PCT	9980

7590 08/23/2002
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EXAMINER

GOETZ, JOHN S

ART UNIT	PAPER NUMBER
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3725

DATE MAILED: 08/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M.

Office Action Summary	Application No.	Applicant(s)	
	09/914,710	DENKER ET AL.	
	Examiner	Art Unit	
	John S. Goetz	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449)

- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)

DETAILED ACTION

Specification

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 3 are generally functional narrations in the nature of abstracts as opposed to proper claims. They are indefinite and fail to conform with current U.S. practice. As a result, many limitations lack proper antecedent basis in the claims. In addition, they appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Furthermore, it is noted that claim 3 is an improper hybrid. As a result, it is not clear whether claim 3 is intended to be a dependent claim, which further limits the method of claim 1, or an independent claim for an apparatus. Because claims 4-7 are dependant on claim 3, thus incorporating its deficiencies, they are also rejected.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely

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exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance:

1. Claim 1 recites the broad limitation “up to approximately 10mm thickness” and the claim also recites “preferably less than 0.2mm thickness” which is the narrower statement of the range/limitation. See also “gas . . . preferably air,” lines 11-12 and “width of 0.1mm to 1mm, preferably 0.2mm” in line 17.
2. Claim 2 recites the broad limitation “approximately 1 to 10 bar” and the claim also recites “preferably approximately 5 bar” which is the narrower statement of the range/limitation.
3. Claim 4 recites the broad limitation “approximately 10mm to 500mm” and the claim also recites “preferably approximately 60mm” which is the narrower statement of the range/limitation.
4. Claim 7 recites the broad limitation “width of 0.1 to 1.0mm” and the claim also recites “preferably approximately 0.2mm” which is the narrower statement of the range/limitation.

Finally, the liberal use of relative terms is noted. Specifically, the terms “especially” and “cushion-like,” in claim 1, and the term “preferably,” in claims 1, 2, 4 and 7, are all relative terms, which render the claims indefinite. They are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Burnand (GB 1,481,022) in view of Daub et al. (5,775,152) and the article "Novel Seal Designs Thwart Leaks" (Chemical Engineering, New York, May 1996).

Specifically, regarding claims 1 and 3, Burnand discloses a method of removing liquid from the surface of a moving strip comprising:

1. a strip drying apparatus including:
 - a. bars (20) positioned above and below the moving strip with blast nozzles (22);
 - b. where the blast nozzles (22) are oriented perpendicular to the moving strip (see Fig. 3), and;
 - c. where the blast nozzles (22) are positioned across the entire width of the strip (see Fig. 3);
2. a method for drying a moving strip including:
 - a. blowing or blasting the moving strip with compressed air (see column 3, lines 43-44);
 - b. forming a pressurized space between the bar and the strip (see column 4, lines 71-72).

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Burnand lacks a partition, the creation of a “buffer,” and specific design dimensions. However, Daub et al. disclose the use of a fixed partition, which separates the wet/dry mill sections, and a movable partition, which allows access to rolls for “carrying out a roll change” (see column 2, lines 44-53). Additionally, the article “Novel Seal Designs Thwart Leaks” discloses, in the highly relevant art of contactless seals (or “buffers”), that the use of “one fluid to contain another” creates little or no friction between moving parts and prevents the passage of virtually any fluid (see page 1) beyond the seal. Finally, Burnand discloses that the upper bar is adjustable, (see column 3, lines 57-59), thus inherently accommodating strips of different thicknesses, and that the bar is “closely adjacent” to the strip (see column 2, line 54). Absent a disclosure of criticality to the solution of stated problems, the strip thickness range and gap range of claim 1 are rendered obvious design choices. Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the strip cleaning and drying apparatus and method of Burnand with partitions and a fluid seal in order to separate the wet and dry sections of the mill, while allowing access to the rolls for changing, and in order to prevent the passage of fluid from the final roll stand to the finished coil.

Claims 2-5 and 7, as best understood, recite specific design tolerances regarding the gas pressure, the width of the nozzle bars, the number of nozzles, the nozzle diameter, and the distance between the strip and the nozzle bar. Since the applicant has not disclosed that these specific dimensions solve any stated problem or are for any particular purpose, they are obvious matters of design choice.

Regarding claim 6, as best understood, Burnand discloses blast nozzles arranged in strips centrally and across the bar, covering the entire strip (see Fig. 3).

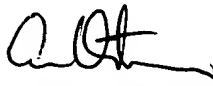
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Goetz whose telephone number is 703-308-1411. The examiner can normally be reached on Mon-Fri 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on 703-308-3136. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-3136.

JSG
August 14, 2002


ALLEN OSTRAGER
SUPERVISORY PATENT EXAMINER
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